4. Write a Java program that accepts the student's name , roll number , and marks in five subjects , each out of 100. The program should validate that all entered marks are between 0 and 100. Calculate total marks (sum of all subjects), Average marks and Percentage. Assign an appropriate grade based on the average marks and add a remark based on the grade.

Code

```
import java.util.Scanner;


public class StudentResult {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);


        String name, remark;
        int roll;
        int marks[] = new int[5];
        int total = 0;
        double avg, percentage;
        char grade;


        // Input student details
        System.out.print("Enter Student Name: ");
        name = sc.nextLine();
```

```
        System.out.print("Enter Roll Number: ");
        roll = sc.nextInt();

        // Input marks with validation
        for (int i = 0; i < 5; i++) {
            do {
                System.out.print("Enter marks of Subject " + (i +
1) + ": ");
                marks[i] = sc.nextInt();
            } while (marks[i] < 0 || marks[i] > 100);

            total += marks[i];
        }

        // Calculations
        avg = total / 5.0;
        percentage = (total / 500.0) * 100;

        // Grade and remark
        if (avg >= 90) {
            grade = 'A';
            remark = "Excellent";
        } else if (avg >= 75) {
            grade = 'B';
            remark = "Very Good";
```

```
        } else if (avg >= 60) {
            grade = 'C';
            remark = "Good";
        } else if (avg >= 40) {
            grade = 'D';
            remark = "Pass";
        } else {
            grade = 'F';
            remark = "Fail";
        }

        // Output
        System.out.println("\nStudent Result");
        System.out.println("Name: " + name);
        System.out.println("Roll Number: " + roll);
        System.out.println("Total Marks: " + total);
        System.out.println("Average: " + avg);
        System.out.println("Percentage: " + percentage +
"%");
        System.out.println("Grade: " + grade);
        System.out.println("Remark: " + remark);

        sc.close();
    }
}
```